CALIFORNIA DEPARTMENT OF HEALTH SERVICES
AVIAN INFLUENZA A (H5N1)
INFECTION CONTROL RECOMMENDATIONS

The California Department of Health Services has developed the following recommendations for persons who have developed acute respiratory illness following travel to a geographic area where avian influenza A (H5N1) outbreaks are ongoing and who meet the CDHS Surveillance Criteria for Influenza A (H5N1) Infection. Given the limited information available on human-to-human transmission of avian influenza, the need to reduce the risk of viral reassortment (i.e., mixing of genes from human and avian viruses), and the rare occurrence of such patients in California, we consider it prudent to continue to take all possible precautions to the extent feasible when caring for patients with known or possible avian influenza. These recommendations were developed specifically for use during the World Health Organization (WHO) Pandemic Phases 3-4 (Pandemic Alert Period: human infection with no or very limited human-to-human transmission suggesting that the virus is not well adapted to humans), and may be modified further if the WHO Pandemic Phase changes or as appropriate for individual situations.

All patients who present to a health-care setting with fever and respiratory symptoms should be managed with **Respiratory Hygiene and Cough Etiquette** (see below) and questioned regarding their recent travel history.

- For patients who are sufficiently ill to be hospitalized, **airborne, droplet and contact precautions** are recommended. Hospitalized patients should be managed with appropriate isolation precautions for 14 days after onset of symptoms unless an alternative diagnosis is established or infection with influenza A (H5N1) excluded.
- For patients who can be managed at home (e.g., patients managed as outpatients or hospitalized patients discharged before 14 days), **modified** (for feasibility in home settings) **droplet and contact precautions** are recommended.

CASE DEFINITION OF SUSPECTED AVIAN INFLUENZA A (H5N1)

Hospitalized patients with:

a. Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, AND

b. History of travel within 10 days of symptom onset to a country with documented H5N1 avian influenza in poultry and/or humans (see above or visit the Web site of the World Organization of Animal Health (OIE) at http://www.oie.int/eng/en_index.htm.)

OR

Hospitalized or ambulatory patients with:

a. Documented temperature of >38°C (>100.4°F), AND

b. One or more of the following: cough, sore throat, shortness of breath, AND

c. History of contact with poultry (e.g., visited a poultry farm, a household raising poultry, or a bird market) or a known or suspected human case of influenza A (H5N1) in an H5N1-affected country within 10 days of symptom onset.

RESPIRATORY HYGIENE/COUGH ETIQUETTE

To prevent the transmission of **all** respiratory infections in healthcare settings, including influenza, the following infection control measures should be implemented at the first point of contact with a potentially infected person.

1. Visual Alerts

Post visual alerts (in appropriate languages) at the entrance instructing patients and persons who accompany them (e.g., family, friends) to inform healthcare personnel of symptoms of a respiratory infection when they first register for care.

2. Respiratory Hygiene/Cough Etiquette

The following measures to contain respiratory secretions are recommended for all individuals with signs and symptoms of a respiratory infection.

- Cover the nose/mouth when coughing or sneezing;
- Use tissues to contain respiratory secretions and dispose of them in the nearest waste receptacle after use;
- Perform hand hygiene (e.g., hand washing with non-antimicrobial soap and water, alcohol-based hand rub, or antiseptic handwash) after having contact with respiratory secretions and contaminated objects/materials.

Healthcare facilities should ensure the availability of materials for adhering to Respiratory Hygiene/Cough Etiquette in waiting areas for patients and visitors.

- Provide tissues and no-touch receptacles for used tissue disposal.
- Provide conveniently located dispensers of alcohol-based hand rub; where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.

3. Masking and Separation of Persons with Respiratory Symptoms

During periods of increased respiratory infection activity in the community (e.g., when there is increased absenteeism in schools and work settings and increased medical office visits by persons complaining of respiratory illness), offer masks to persons who are coughing. Either procedure masks (i.e., with ear loops, or cone mask with elastic band) or surgical masks (i.e., with ties) may be used to contain respiratory secretions (respirators such as N-95 or above are not necessary for this purpose). When space and chair availability permit, encourage coughing persons to sit at least three feet away from others in common waiting areas. Some facilities may find it logistically easier to institute this recommendation year-round.

4. Droplet Precautions

Advise healthcare personnel to observe Droplet Precautions (i.e., wearing a surgical or procedure mask for close contact), in addition to Standard Precautions, when examining a patient with symptoms of a respiratory infection, particularly if fever is present. These precautions should be maintained until it is determined that the cause of symptoms is not an infectious agent that requires Droplet Precautions.

HEALTHCARE SETTINGS

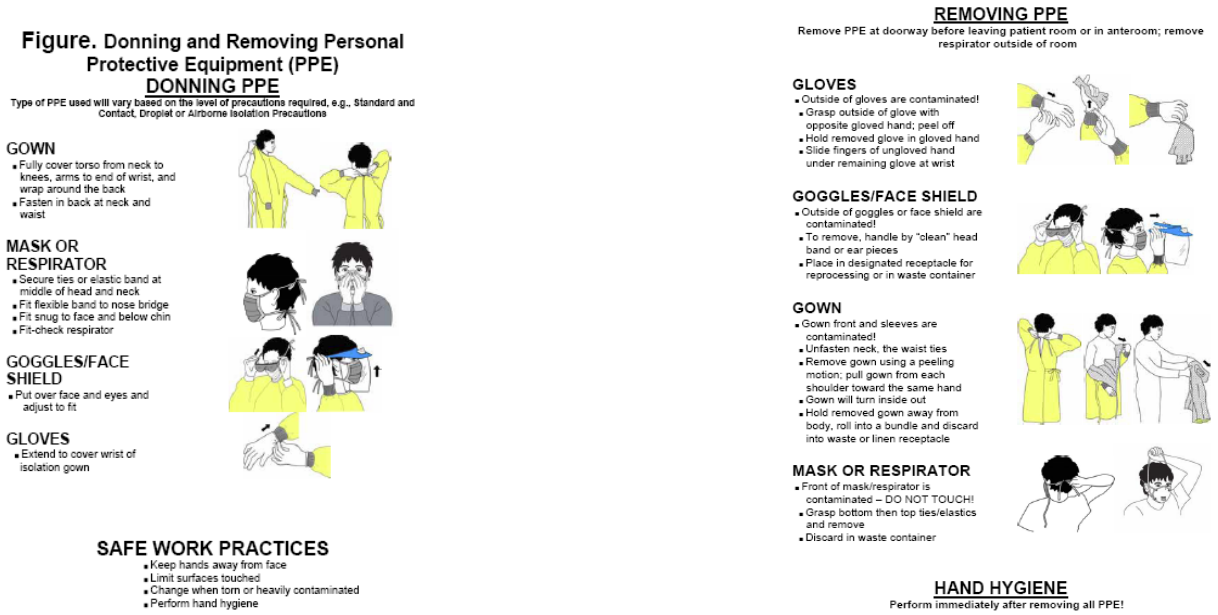
Isolation Precautions

Patients in emergency departments, examination rooms, and when hospitalized should be placed on **airborne, droplet and contact** precautions. This includes the following:

- Instruct the patient to wear a surgical mask over their nose and mouth at all times in the healthcare setting, if possible, until placed in an airborne isolation room and told by the staff that it is safe to remove the mask.
- In *acute care settings,* place patient in an airborne infection isolation room (AIIR) when available. Such rooms should have monitored negative air pressure in relation to corridor, with 6 to 12 air changes per hour (ACH), and exhaust air directly outside or have recirculated air filtered by a HEPA filter. If AIIR is not available, place patient in a room as described below for ambulatory care settings. The door should remain closed and a sign placed on the door warning persons to check with staff prior to entering.
- In *ambulatory care settings*, place patient in an AIIR when available. If an AIIR is not available, place patient in an examination room at the farthest distance from other patient rooms, preferably one that is at the end of the ventilation circuit and place a portable HEPA filter in the room. Once the patient leaves, the room should remain vacant with the door closed for the appropriate time according to the number of air changes per hour, usually one hour, to allow for a full exchange of air. The room should then have surfaces disinfected prior to placing the next patient in the room. The person cleaning the room should wear an N95 respirator.
- Personal protective equipment for healthcare personnel:
  - Wear fit tested NIOSH-approved respiratory protection (N95 filtering facepiece respirator or higher) when entering the room. Respirators should be used in the context of a complete respiratory protection program as required by the California Occupational Safety and Health Administration (Cal/OSHA). This includes training, fit-testing, and fit-checking to ensure appropriate respirator selection and use. To be effective, respirators must provide a proper sealing surface on the wearer's face
  - Wear eye or full facial protection (face shield or goggles) when direct face to face contact within 3 feet of a coughing patient is anticipated.
  - Use a disposable long sleeve gown when any contact with patient or the patient's immediate environment is anticipated.
  - Wear disposable, non-sterile gloves when any contact with the patient or the patient's immediate environment is anticipated.
- ***Gloves are not intended to replace proper hand hygiene.*** Perform hand hygiene after contact with patient and environmental surfaces close to the patient, and after removal of gloves. If hands are not visibly soiled an alcohol-based hand hygiene product can be used.
- Instruct persons in contact with the patient not to touch the mucous membranes of their own nose, eye or mouth with unwashed hands.
- Use dedicated equipment such as stethoscopes, disposable blood pressure cuffs, disposable thermometers, etc.
- Give room priority (at least daily) cleaning and disinfection of high touch surfaces (bed rails, bedside commodes, faucet handles, doorknobs, carts, charts) and equipment in the immediate vicinity of the patient.

Donning and Removing Personal Protective Equipment (PPE)

For pathogens that may be transmitted through contamination of skin and clothing, it is important for health-care workers to follow the proper sequences for donning and removal of PPE (source CDC http://www.cdc.gov/ncidod/sars/ic.htm):



Vaccination of Health-Care Workers against Human Influenza

Health-care workers involved in the care of patients with documented or suspected avian influenza should be vaccinated with the most recent seasonal human influenza vaccine. In addition to providing protection against the predominant circulating influenza strain, this measure is intended to reduce the likelihood of a health-care worker's being co-infected with human and avian strains, where genetic rearrangement could take place, leading to the emergence of potential pandemic strain.

Surveillance and Monitoring of Health-Care Workers

- Instruct health-care workers to be vigilant for the development of fever (i.e., measure temperature twice daily), respiratory symptoms, and/or conjunctivitis (i.e., eye infections) for 1 week after last exposure to avian influenza-infected patients.
- Health-care workers who become ill should seek medical care and, prior to arrival, notify their health-care provider that they may have been exposed to avian influenza. In addition, employees should notify occupational health and infection control personnel at their facility.
- With the exception of visiting a health-care provider, health-care workers who become ill should be advised to stay home until 24 hours after resolution of fever, unless an alternative diagnosis is established or diagnostic tests are negative for influenza A virus.
- While at home, ill persons should practice good Respiratory Hygiene and Cough Etiquette to lower the risk of transmission of virus to others.

HOME SETTINGS

- Patients should limit interactions inside and outside the home and should not go to work, school, out-of-home childcare, or other public areas until fourteen days after the onset of symptoms. During this time, infection control recommendations, as described below, should be used to minimize the potential for transmission.
- Each patient should be advised to cover his or her mouth and nose with a facial tissue when coughing or sneezing. Patients should wear a surgical mask when in the same room as uninfected persons. If the patient is unable to wear a surgical mask, household members should wear surgical masks when in the same room as the patient and they anticipate or are likely to be within 3 feet of the patient.
- Use of disposable gloves should be used for any contact with the ill person or the person's immediate environment. ***Gloves are not intended to replace proper hand hygiene.*** Household members should also wash their hands with soap and water after gloved and ungloved contact with the ill person. Immediately after activities involving contact with body fluids, gloves should be removed and discarded and hands should be washed. Alcohol-based hand hygiene products can be used after removing gloves and when hands are not visibly soiled with respiratory secretions, blood and other body fluids. Gloves should never be washed or reused.
- Sharing of eating utensils between patients and other household members should be avoided. Dishes and utensils should be washed with hot water and a detergent after use by the ill person. There is no need for use of disposable plates or eating utensils.
- The patient should have their meals brought to them in their room.
- Environmental surfaces in the kitchen, bathroom and bedroom should be cleaned at least daily with a household cleaner diluted and used according to manufacturer's instructions. There is no reason to make the solution 'extra-strength'. If bleach is used, it should be diluted 1 part bleach to 10 parts water, and a fresh solution mixed daily
- The patient's clothes, bed linens, and towels should not be shared with well household members. Linens should be washed in cool to warm water and any commercial laundry product. Gloves should be worn for handling any patient items used in the previous 24 hours.
- Household waste soiled with respiratory secretions or other body fluids, including facial tissues and surgical masks, may be safely disposed of as normal household waste.
- Limit the amount of patient-care equipment brought into the home. Leave patient-care equipment in the home until discharge from home care services. Clean and disinfect items before taking them from the home or place in plastic bag for subsequent cleaning.
- Household members or other close contacts of patients should be vigilant for fever (i.e., measure your temperature twice daily), respiratory symptoms, and other early symptoms of influenza. Those who develop fever (measured temperature greater than 100.4°F [>38.0°C]) or respiratory symptoms should seek healthcare evaluation. When possible, inform the healthcare provider of the exposure before going to the doctor's office or the emergency department. Contacts should be isolated in-hospital or at home as appropriate to their clinical condition pending confirmatory studies.
- At this time, in the absence of fever or respiratory symptoms, household members or other close contacts of possible influenza A/H5N1 patients need not limit their activities outside the home. They should wash their hands upon exiting their home.